

LESSONS LEARNED FROM TWO SOCIAL MARKETING  
HIV PREVENTION INTERVENTIONS

by

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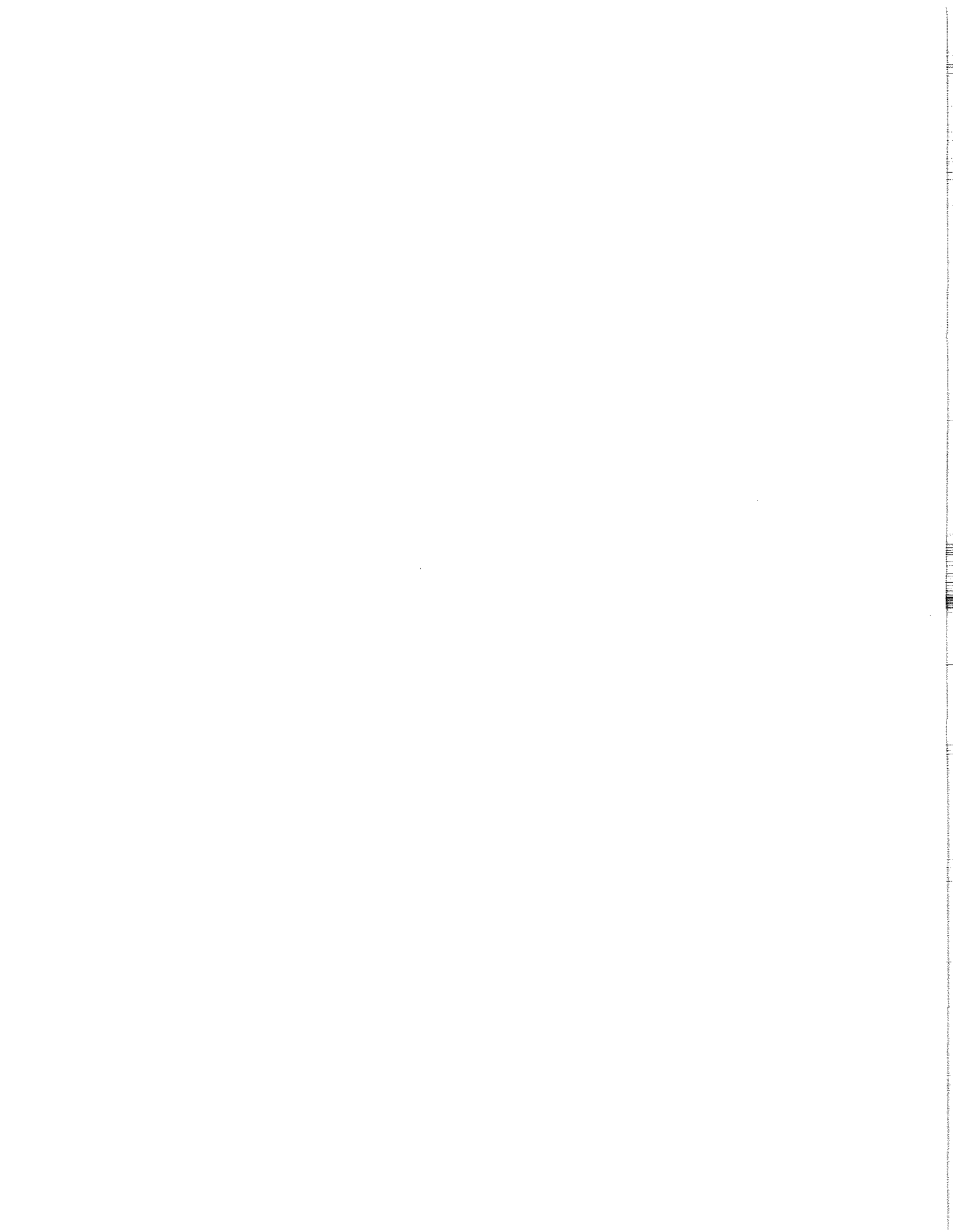
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## I. INTRODUCTION

HIV/AIDS continues to be a problem in the United States and the epidemic continues to change. As the incidence of HIV decreases in some populations as a result of awareness and testing campaigns, the rate of infection has been increasing in others. Despite the fact that we have learned much about the transmission of HIV and important risk factors such as unprotected sexual intercourse are known, the disease continues to affect hundreds of thousands in the U.S. alone. Since the early days of the epidemic, HIV prevention efforts have seen modest results. Behavior is difficult to change and we have learned that mere dissemination of information is not adequate to change behavior. New challenges to HIV prevention efforts have been encountered as the epidemic shifts to high-risk populations that are frequently poor, marginalized, and thus, difficult to reach with traditional public health interventions. Thus, we need to come up with new and creative ways to reach high-risk populations since traditional methods and messages do not appear to be effective. In this paper, I critique social marketing as a possible solution to creating effective HIV prevention interventions targeted to high-risk U.S. populations. The purpose of this paper is to investigate the lessons learned from HIV prevention interventions in the U.S. that used social marketing approaches.

First, I present some background information by reviewing the current CDC statistics on the incidence and prevalence of HIV and AIDS in the U.S. to attempt to define the problem. I then briefly discuss the health disparities seen in HIV/AIDS and the adolescent and young adult population. A review of these statistics should explain why I chose African American adolescents and young adults as my population of interest. I then introduce my research question and explore the concept of social marketing. A systematic review of the literature introduces the HIV prevention strategies that have been tried in the past and which strategies have been found

to be evidence-based. Since they are my population of interest, I review the HIV prevention interventions that have focused on African American adolescents and young adults with a focus on randomized controlled trials since they are the current gold standard of clinical trials. I also include a meta-analysis and a research synthesis that focus on behavioral strategies.

Lastly, I describe my methods including inclusion criteria, evaluation questions, data sources used, difficulties contacting the programs, and data analysis and I give brief program descriptions for the HIV social marketing prevention interventions evaluated in this paper. My evaluation has two main components. I first evaluate the interventions using specific criteria to discern whether or not a program in fact used social marketing techniques. Then I offer more general lessons learned from the experiences of the interventions and offer my perspective on implications for practice and policy as well as areas for future research.

## **II. BACKGROUND**

### **DEFINING THE PROBLEM**

#### **U.S. HIV/AIDS Incidence and Prevalence**

According to the Centers for Disease Control and Prevention (CDC), there are an estimated 850,000 to 950,000 people currently living with HIV in the United States<sup>1</sup> but these numbers are most likely to be underestimated. The current estimates of HIV infections are only based on data from the 32 states that used confidential, name-based reporting of HIV and AIDS cases for greater than or equal to four years (2000-2003). Thus both the incidence and prevalence numbers frequently cited by the CDC are likely to be underestimated.<sup>1</sup> In 1994, the CDC began supporting a uniform system for national HIV/AIDS surveillance and at this time, only 25 states required confidential reporting of persons with HIV infection and this did not include several large states, e.g., California, Illinois, New York, and Washington.<sup>2</sup> Since then, analyses have

been possible on data from 32 states, however, according to the CDC, this accounts for only 49% of the national total of AIDS diagnoses during the same period and thus might not be nationally representative.<sup>1</sup> Also, data from states with the highest AIDS morbidity in 2003 (e.g., California and New York) were not included in these analyses. Thus, the CDC prevalence and incidence statistics must be considered with these limitations in mind.

Based on the CDC data from 32 states during 2000 to 2003<sup>1</sup>, approximately 70% of all new infections each year occur among men. Men who have sex with men (MSM) represent the largest proportion of new infections (61%), followed by high-risk heterosexual contact (17.3%) and IV drug use (IDU) (14.6%). The largest proportion of new infections in females was high-risk heterosexual contact (77.7%), followed by IDU (19.4%). Since the beginning of the epidemic through December 2000, 774,467 AIDS cases and 448,060 deaths have been reported in the U.S.<sup>3</sup> Since the use of highly active antiretroviral therapy (HAART) starting in 1996, advances in HIV treatment have led to declines in AIDS deaths and have slowed the progression from HIV to AIDS.

Since the peak of HIV in the mid-1980s, the overall incidence of HIV in the U.S. has declined but this decrease is primarily due to changes in the behavior of white homosexual men older than 30 years.<sup>4</sup> Among young blacks and Hispanics, the incidence reduction in men who have sex with men (MSMs) and injection drug users (IDUs) in their 20s has been offset by the increased incidence in teenagers and heterosexual men.<sup>5</sup> In addition to those who have been tested and are aware of their status, the CDC estimates that approximately 180,000 to 280,000 (approximately 25%) persons who are HIV positive in the U.S. are unaware of their serostatus.<sup>1</sup> Thus, the HIV/AIDS epidemic in the U.S., which began primarily among white gay men, is now

propagated by young people who exhibit high-risk sexual behavior and drug use, many of whom are not aware that they are infected.

### **Disparities in HIV/AIDS**

Racial and ethnic disparities in HIV are illustrated in the HIV incidence statistics and are seen in both genders. Ethnic minorities account for the majority of new infections and are out of proportion to their representation in the population. According to the CDC data from 2000-2003 (from 32 states), more than half of new HIV infections occur among non-Hispanic blacks (51.3%) though they represented only 13% of the U.S. population of those states during these four years. Hispanics account for approximately 15% of the estimated new HIV infections. Approximately 1 in 50 African American men and 1 in 160 African-American women are estimated to be infected with HIV, compared to 1 in 250 white men and 1 in 3000 white women.<sup>6</sup> Sixty-four percent of new infections among U.S. women occur in African American women and 18% occur in Hispanic women, even though they comprise only one fourth of U.S. women. According to the CDC, the rates among non-Hispanic black females were 19 times the rate among non-Hispanic white females.

In addition to the HIV statistics, the disparity in burden of HIV/AIDS can also be estimated from reports from diagnosed AIDS cases. While African Americans and Hispanics make up approximately 25% of the U.S population, they represent approximately 57% of reported AIDS cases in the U.S. since 1981. Minority women have been disproportionately affected by HIV/AIDS. The proportion of all AIDS cases reported among adult and adolescent women has more than tripled, with African-Americans and Hispanics accounting for more than three fourths of the AIDS cases reported to date.<sup>7</sup>



Disparities in HIV/AIDS are also revealed in mortality statistics. According to the CDC, in the United States, HIV-related death has the greatest impact on young and middle-aged adults, particularly racial and ethnic minorities. In 1991, HIV/AIDS became the leading cause of death among African-American men aged 24-44 in the United States. In 1999, HIV/AIDS became the third leading cause of death among African-American women in the same age group.<sup>8</sup> As illustrated in the National Vital Statistics Report in 2002 (this is the most recent report available) which is based on 2000 data, HIV is the seventh cause of death in all races, both sexes, ages 20-24 years and is the eighth most common cause of death in blacks, both sexes, ages 15-19 years. According to the 2000 data, HIV disease is the number one cause of death for black females, ages 25-34 years.<sup>9</sup> As of December 2000, the cumulative U.S. death toll was 206,909 in whites, 158,892 in blacks, and 77,698 in Hispanics.

Since, according to the CDC data, more than half of new HIV infections occur among non-Hispanic blacks, and the disparities are reflected not only in HIV incidence data but also in AIDS statistics and AIDS mortality data, my population of interest is the African American population. I find it particularly concerning that HIV disease is the number one cause of death for black females, ages 25-34, according to the 2000 data. But, despite the existence of many interventions that target women, I focus on interventions that include both young men and women since sexual relations are between them and are often complicated by male-female dynamics. Furthermore, I focus specifically on African American adolescents and young adults for reasons that will be explained in the next section.

### **HIV in the adolescent and young adult population**

The CDC recognizes that many of the young adults who are dying from HIV/AIDS were likely infected in their teens and twenties. Thus, it follows that prevention efforts should be

targeted to this age group. The long and asymptomatic period between HIV infection and the identification of AIDS via AIDS-defining illnesses makes it difficult to estimate the number of HIV-infected adolescents.<sup>10</sup> Estimates of HIV-positive adolescents have ranged between 112,000 and 250,000.<sup>11</sup> It has been estimated that at least half of all new HIV infections in the U.S. are among people under 25 (about 20,000).<sup>12</sup> These statistics most likely grossly underestimate the actual incidence and prevalence of HIV infections since only 32 states track HIV infections. Thus, HIV prevention among adolescents and young adults should continue to be a priority. Another reason to target this age group is that while some will contract HIV during adolescence, many more will develop patterns of behavior during this period that may place them at risk throughout their lives.<sup>13</sup> Thus, HIV prevention interventions that focus on behavior change should target this young population to prevent these patterns of behavior from developing.

When targeting adolescents and young adults, prevention efforts should focus on high-risk groups such as African Americans and Latinos since marked disparities in HIV incidence, AIDS cases, and mortality (described earlier in detail) can be seen in these groups. Based on the current statistics, HIV prevention interventions that successfully target minority adolescents and young adults should continue to be a priority and these statistics are the basis for my choice of population of interest: African American adolescents and young adults.

## **THE RESEARCH QUESTION**

Despite decades of HIV prevention interventions, the U.S. HIV/AIDS epidemic continues with increasing disparities and new challenges. My choice to focus on social marketing programs is based on the limited success of past HIV prevention interventions and the suggestion that a targeted approach may be more effective with at-risk or highly ostracized populations such as

those disproportionately affected by HIV/AIDS.<sup>14</sup> *Social marketing* is the application of marketing practices to nonprofit and social purposes such as a public health concern.<sup>15</sup> This technique has not been fully explored in the U.S. while, for decades, social marketing techniques have been used successfully by public health programs throughout Africa, Asia, North American and South America.<sup>15</sup> New and innovative approaches are needed to address increasing HIV/AIDS racial disparities by reaching these marginalized U.S. populations. The use of these marketing practices serves to persuade a target group to adopt an idea, product, or behavior by using techniques of media. This technique could serve to be very useful with difficult-to-reach populations, such as my population of interest, by creating interventions that are customized specifically to reach that population.

The purpose of this paper is to investigate the lessons learned from two HIV prevention interventions that used social marketing approaches. All programs that met the following criteria were considered for inclusion: 1) programs that were found to have most (if not all) of the components of social marketing, 2) programs that included an evaluation component, 3) articles published in English, 4) articles published after 1990. According to a systematic review performed by Darcie Mersereau in the fall of 2003, only two such programs exist. These two programs are the focus of this program evaluation.

## **SOCIAL MARKETING**

Before the term *social marketing* was coined in 1971, a sociologist, G.D. Wiebe, stimulated a shift in ideas about the realm of marketing when he posed this provocative question in a 1952 paper: Why can't brotherhood be sold like soap?<sup>16</sup> Wiebe concludes from his analysis of various social campaigns that society's aspirations can be sold through the application of marketing techniques. The term *social marketing* was coined by Philip Kotler in 1971 and this

term was defined by Kotler and Gerald Zaltman as “the design, implementation, and control of programs calculated to influence the acceptability of social ideas, and involving considerations of product, planning, pricing, communication, distribution and marketing research.”<sup>17</sup> This definition gave rise to the mnemonic “four Ps” – product, price, place, and promotion – with which social marketing is commonly associated.

The theory of social marketing was first put into practice within the international development arena in the 1960s and 1970s. During this time, various programs used social marketing techniques to promote immunization, family planning, agricultural reforms, and nutrition in various developing countries. According to Walsh et al, much of the important research and development done to advance social marketing applications to health has taken place in the international family planning field. Many of these family planning social marketing programs built on the experiences of projects funded by the U.S. Agency for International Development (USAID) and the Ford Foundation. Many subsequent social marketing projects were later funded by these two agencies.

This initial interest in social marketing in the international development community began to expand to other areas of health promotion and disease prevention. Numerous projects to reduce cardiovascular disease risk, such as the National Heart, Lung, and Blood Institute (NHLBI)-sponsored national campaigns to reduce levels of hypertension and cholesterol, used the term *social marketing*. Others did not use this term, but began to incorporate concepts and technology from the business sector to their projects. Today, a wide range of U.S. federal agencies as well as state and local governments and a significant number of nonprofit organizations have all adopted social marketing approaches. UNAIDS and the World Bank are both incorporating social marketing techniques into their prevention efforts.

In practice today, there exists some confusion about what social marketing is and what it is not. A search using the key word *social marketing* in PubMed in March 2004 yielded over 700 articles. In a review of health promotion literature between 1982 and 1996, Hill found 93 articles involving social marketing that were of three general types: case studies, tool applications, and conceptual debates.<sup>18</sup> Walsh et al asserts that among specialists in the field, “definitions and disciplinary boundaries seem relatively clear and straightforward” and but she concedes that “in the health literature the concept of social marketing is still elastic and elusive.”<sup>19</sup> A common misconception is that social marketing is synonymous with advertising or mass media campaigns. Most experts in the field would agree that while social marketing has its roots in social advertising, it has since expanded into other areas such market research, attention to product development, and the use of techniques to facilitate motivational exchanges.<sup>19, 32</sup>

Based on the modest results of most HIV prevention interventions, I submit that new ideas are necessary to make these interventions more effective. My attraction to social marketing as a method of designing and delivering an HIV prevention intervention is three-fold. First, this technique has been used successfully in developing countries for several decades and is recognized by several funding agencies such as USAID as an appropriate and an effective methodology. Secondly, the social advertising aspect allows for a shift in social and cultural norms (e.g., condom use, smoking, use of seat belts) and thus can impact not only the individual-level but also higher-level determinants of health such as community-level, organizational-level and population-level. Lastly, a social marketing approach allows the intervention designer to customize the intervention to the specific high-risk population that one is hoping to impact. I offer this approach as a possible strategy to create more effective HIV prevention interventions

that will allow planners to focus on specific populations to decrease the disparities seen in this disease.

### **III. SYSTEMATIC REVIEW OF THE LITERATURE**

Prior to proposing a new strategy, I feel it is necessary to briefly review the strategies that have already been employed. Although a number of strategies have been tried or proposed worldwide such as STI\* control (through both behavior change and condom use), reducing risk in IV drug users, treatment of Bacterial Vaginosis (BV) (Africa), topical microbicides (trials ongoing), the diaphragm (trials planned), male circumcision (trials ongoing), antiviral therapy with people with HIV (trials ongoing), and vaccines (trials ongoing), many of these strategies are still in the trial phases and many of them are most applicable to the epidemics in developing countries or specific to the Africa epidemic (e.g., treatment of BV). The strategies most often used with U.S. populations are behavior change (e.g., risk reduction) and condom use.

According to many authors, prevention of sexual and substance-use risk acts remains the most effective strategy against HIV infection.<sup>12</sup> According to the CDC, the majority (92%) of identified seropositive youth are infected via sexual transmission.<sup>20</sup> Adolescent females are more likely to acquire HIV heterosexually than other methods of HIV transmission. Thus, sexual transmission is the primary behavior that is targeted by most adolescent HIV prevention programs in the U.S., with substance abuse as a second targeted behavior. Thus, my systematic review of the literature will focus on interventions that seek to change sexual risk taking behaviors. I also attempted to focus on those interventions that focused on African American

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\* Note: Sexually Transmitted Infections (STIs) has replaced Sexually Transmitted Diseases (STDs) in the current literature. However, these two terms are interchangeable and since this is a recent change, many publications will use "STDs" instead. Thus, I have used STI wherever possible, excluding direct quotes from papers that used the term "STD."

adolescents and/or young adults, but in the absence of interventions specifically targeted to that population, more general interventions are also discussed.

## **THE COCHRANE DATABASE**

A search of the Cochrane database<sup>21</sup> in March 2005 using keywords “HIV” and “prevention” identified 140 possible systematic reviews. Of these, most of the articles were not, in fact, related to HIV prevention (111), seven were related to the treatment of opportunistic infections, six were related to mother-to-child transmission, three dealt with the types of treatment for HIV, three related to HIV in IDUs, two dealt with HIV testing, two related to nutritional supplements for persons living with HIV, one related to post-exposure prophylaxis (PEP), one dealt with MSM and six were related to HIV prevention but were only protocols.

I will briefly summarize findings that focus on behaviors other than condom use that affect the sexual transmission of HIV. One systematic review studied the use of nonoxynol-9 and found an increase instead of a decrease HIV transmission to women, thus the use of this is no longer recommended with condoms. Another looked at male circumcision and HIV and found no evidence to support male circumcision as a means of preventing HIV (observational studies had previously suggested that male circumcision might prevent HIV transmission). There is currently no systematic review or meta-analysis in the Cochrane database that specifically relates to adolescents or young adults and HIV prevention, although there is one protocol that deals with behavioral interventions for decreased HIV infection in racial and ethnic minorities in high-income economies. The remaining studies that are related to behavioral strategies and condom use are briefly discussed below.

A search of the Cochrane database in March 2005 revealed a systematic review that examined population-based STI interventions and their impact on HIV. While the authors

concluded that there is limited evidence from randomized controlled trials for STI control as an effective HIV prevention strategy, they also concluded that “improved STI treatment services *were* shown [emphasis added] to reduce HIV incidence in an environment characterized by an emerging HIV epidemic, where STI treatment services are poor and where STIs are highly prevalent.”<sup>22</sup> I would characterize my population of interest, African American adolescents and young adults, as primarily existing in precisely these types of environments.

A search of the Cochrane database in March 2005 revealed a systematic review that examined condom effectiveness in reducing heterosexual HIV transmission.<sup>23</sup> This review, based on studies done mostly outside of the U.S., concluded that consistent use of condoms results in 80% reduction in HIV incidence. Even prior to the publication of this review in 2003, most of the HIV prevention interventions in the U.S. that have targeted adolescents and young adults have focused on abstinence education, safer sex education (e.g., condom use education) or both and have assessed self-reported condom use and other behaviors (e.g., multiple sex partners) as outcome measures.

## **A META-ANALYSIS**

A search of PubMed (MEDLINE) in March 2005 using MESH terms “HIV” and “prevention” and various additional searches using keywords “HIV,” “prevention,” “African American,” “minority,” and “adolescent” and limits of “Meta-analysis,” “English,” and “human” identified only one meta-analysis that relates to behavioral interventions to prevent HIV in African American adolescents. This meta-analysis examined sixteen behavioral HIV prevention interventions in the U.S. reported during 1992-1998 and demonstrated a statistically significant protective effect of sexual risk-reduction interventions, both in- and out-of the classroom, on sexual risk behavior.<sup>24</sup> The authors of this study found more protective outcomes were



associated with interventions that took place in groups with 100% ethnic similarity and propose that this is possibly an indicator of the importance of cultural fit with the approach to this sensitive topic. This concept of the importance of “cultural fit” adds to the appeal of a social marketing approach to HIV prevention. A customized intervention, as is developed using social marketing techniques, would strive to provide this cultural fit by matching the intervention to the specific population.

## **A RESEARCH SYNTHESIS**

A search of PubMed (MEDLINE) in March 2005 using MESH terms “HIV” and “prevention” and various additional searches using keywords “HIV,” “prevention,” “African American,” “minority,” and “adolescent” and limits of “review,” “English,” and “human” identified one review, a research synthesis by Johnson et al, that sought to summarize studies that have tested the efficacy of HIV sexual risk-reduction interventions in adolescents. While this synthesis did not focus on interventions that targeted African American adolescents, the authors found that intensive behavioral interventions reduced sexual risk.<sup>25</sup> The interventions reviewed increased skill acquisition, sexual communications, and condom use and decreased the onset of sexual intercourse of the number of sexual partners. This review included studies with experimental designs and did not focus on gender or racial differences in the effects of the various interventions, however, it does add to the evidence that these types of behavioral interventions can reduce sexual risk.

## **RANDOMIZED CONTROLLED TRIALS (RCTs)**

The prior review provides evidence that condom use does in fact decrease the transmission of HIV and that behavioral interventions can reduce sexual risk. Since RCTs are the current gold standard of clinical trials, I reviewed all of the RCTs available on MEDLINE that

have focused on HIV prevention intervention efforts in my population of interest: African American adolescents or young adults. Due to the limited nature of such focused studies, I have also included those in which the majority of subjects were African American adolescents or young adults. A search of PubMed (MEDLINE) in March 2005 using MESH terms “HIV” and “prevention” and various additional searches using keywords “HIV,” “prevention,” “African American,” “minority,” and “adolescent” identified possible RCTs. Only three RCTs were found that focused on African American adolescents or young adults or in which the majority of the subjects were African American adolescents. These three interventions are:

DiClemente RJ, Wingood GM, Harrington KF, Lang DL, Davies SL, Hook EW, Oh MK, Crosby RA, Hertzberg VS, Gordon AB, Hardin JW, Parker S, Robillard A. Efficacy of an HIV Prevention Intervention for African American Adolescent Girls: A Randomized Controlled Trial. *JAMA*. July 14, 2004. Vol 292, No. 2.

Boekeloo BO, Schamus LA, Simmens SJ, Cheng TI, O'Connor K, and D'Angelo LJ. A STD/HIV prevention trial among adolescents in managed care. *Pediatrics*. 1999; 103:107-115.

Jemmott J, Jemmott L, Fong F. Abstinence and safer sex HIV risk-reduction interventions for African American adolescents. *JAMA*. 1998;279:1529-1536.

These are briefly discussed below.

A randomized controlled trial by DiClemente et al sought to evaluate the efficacy of an intervention to reduce sexual risk behaviors, STIs, and pregnancy and enhance mediators of HIV-preventive behaviors in sexually experienced African American girls aged 14 to 18 years.<sup>26</sup> All participants received four 4-hour group sessions. The intervention sessions emphasized ethnic and gender pride, HIV knowledge, communication skills, condom use skills, and healthy relationships. The control group received sessions that emphasized exercise and nutrition. The participants completed a self-administered questionnaire and an interview, demonstrated condom application skills, and provided specimens for STI testing. The primary outcome measure was consistent condom use. Secondary outcome measures included sexual behaviors, observed

condom application skills, incident STI infection, self-reported pregnancy, and mediators of HIV-preventive behaviors. Outcome assessments were made at 6- and 12-month follow-up.

These authors report that participants in the intervention reported using condoms more consistently in the 30 days preceding the 6-month assessment (75.3% vs. 58.2%), at the 12-month assessment (73.3% vs. 56.5%) and over the entire 12-month period (adjusted odds ratio 2.01; 95% CI, 1.28-3.17;  $p = 0.003$ ). Additionally, participants in the intervention reported using condoms more consistently in the 6 months preceding the 6-month assessment (61.3% vs. 42.6%), at the 12-month assessment (58.1% vs. 45.3%) and over the entire 12-month period (adjusted odds ratio 2.30; 95% CI, 1.51-3.50;  $p < 0.001$ ). Adolescents in the intervention were also more likely to use a condom at last intercourse, were less likely to have a new vaginal sex partner in the past 30 days, and were more likely to apply condoms to sex partners. Adolescents in the intervention had better condom application skills, a higher percentage of condom-protected sex acts, fewer unprotected vaginal sex acts, and higher scores on measures of mediators. The authors of this study concluded that “interventions for African American adolescent girls that are gender-tailored and culturally congruent can enhance HIV-preventive behaviors, skills and mediators and may reduce pregnancy and Chlamydia infection.”

This study has several limitations that are commonly seen with HIV prevention interventions. One of these limitations is the reliance on self-reported outcome measures. In their discussion, the authors recognize this as a limitation but state that previous research has established the validity and reliability of self-reported sexual behavior, specifically for young African American women. Another limitation is the study’s generalizability to other populations. The authors conclude that “the findings may not be applicable to African American adolescent girls with different sociodemographic characteristics or risk profiles.” The third limitation was

that the small sample size hindered the ability to detect a difference in incident STIs. This would otherwise serve as an important secondary outcome and an independent marker for sexually risky behavior that would also increase exposure to HIV.

A randomized controlled behavioral intervention trial by Boekeloo et al sought to determine if STI risk assessment (including HIV) and education tools provided as part of office-based primary care reduce adolescent risky sexual behaviors and increase condom use.<sup>27</sup> The study subjects were 12 to 15 year olds in the Washington DC area and were members of health maintenance organizations. Study physicians were all pediatricians in five practice sites in the Washington DC area. Of the 219 study subjects, approximately 60-70% of each study group was African American (control and intervention). The educational materials described the potential for STI and HIV infection from vaginal, oral, and anal sexual behaviors and how to lower risks through barrier protection or abstinence. The visits of control group adolescents were unsupported by study educational tools.

The authors report a positive impact on adolescent-reported condom use at 3 months (92% intervention vs. 57% control) which had dissipated by 9 months (71% intervention vs. 70% control). However, at the 9-months follow-up, more control than intervention group adolescents reported seeing signs of a possible STI in the last 6 months (5.9% control vs. 1.1% intervention). There were no statistically significant differences in signs of a possible STI between control and intervention at the 3-month follow-up. The authors assert that these results suggest that the cumulative effect of the increases in adolescent awareness and condom use was a decrease in sexual risk.<sup>27</sup>

The main outcome measure for this study was adolescent-reported sexual intercourse and condom use. Although randomized controlled trials generally have low susceptibility to bias in

comparison to other study designs (e.g., cohort studies, case-control studies), relying on self-report is subject to recall bias and social desirability bias. For example, those adolescents who had STI symptoms at 9 months may be more willing or more likely to report lack of condom use than those without STI symptoms simply because they have symptoms and are more likely to recall their unprotected sexual encounters. Alternatively, they might be more likely to report condom use simply because they know they had been told that this would reduce their risk of STIs/HIV and this is the socially desirable answer. The participants' responses could be intentionally or unintentionally inaccurate. However, in this case, the magnitude and the direction that this bias may have affected the outcome is unknown. The main conclusion of this study relies on an association between self-reported STI symptoms as an indicator of sexual risk. Although this has biological validity, it is affected by the biases of self-reported information.

Another limitation of this study is its generalizability to other populations. This STI/HIV intervention study took place in Washington DC where the rates of early sexual activity are among the highest in the nation.<sup>28</sup> These results may not be generalizable to a more suburban or rural population. Also, the findings are not generalizable to adolescents whose parents refused their participation (134 out of 524 subjects prior to randomization). The authors also concede that their findings may not be generalizable to adolescents without health insurance and without telephones. Since 60-70% of the study subjects were African American, the study results may not be generalizable to non-African American adolescents. However, this study may be valued if the results are reproducible in similar high-risk urban populations, such as our population of interest: African American adolescents and young adults.

A randomized controlled trial by Jemmott et al<sup>29</sup> examined the effects of HIV risk-reduction interventions on the sexual risk behaviors of young inner-city African American

adolescents. This 1998 study, which included an abstinence intervention and a safer-sex intervention that stressed condom use, is considered to be the first randomized controlled trial of an abstinence intervention. (Although two previous studies found significant effects of abstinence interventions, they were not randomized controlled trials, hence, not the current gold standard.<sup>30,31</sup>) The authors based the intervention on cognitive-behavioral theory. They assert that in contrast to past abstinence interventions, theirs is not vulnerable to many common criticisms since the intervention provided accurate information, did not portray sex in a negative light, and was not moralistic.

The primary outcome measures for this study were self-reported sexual behaviors in the previous 3-months, including sexual intercourse, condom use, and unprotected sexual intercourse. These were assessed via confidential questionnaires before the intervention, and at 3-, 6-, and 12-month follow-ups. The secondary outcomes included potential mediators of the effects of interventions on HIV risk-associated sexual behavior. These variables, based on various cognitive behavioral models, included such beliefs as condom-use prevention beliefs, condom-use hedonistic beliefs, condom availability beliefs, etc. For example, one item measured condom-use self-efficacy as follows: "I am sure that I can use a condom if I have sex."

Adolescents in the abstinence group were significantly less likely to report having sexual intercourse in the 3 months after the intervention than were those in the control group (OR 0.45, 95% CI 0.23-0.86) and marginally less likely to report such behavior than were those in the safer-sex group (OR 0.54, 95% CI 0.28-1.07). At the 12-month follow-up, self-reported frequency of condom use was higher in the safer-sex group (62.5%) than in the abstinence group (41.2%) or the control group (51.2%). Adolescents in both HIV-prevention groups scored significantly higher in HIV risk-reduction knowledge than did those in the control group. In

addition, adolescents in the safer-sex group scored significantly higher than did those in the abstinence group. Although this study found both HIV-prevention interventions to be effective, the authors found that safer-sex interventions may be especially effective with sexually experienced adolescents and may have longer-lasting effects.

This study suffers from some of the same weaknesses as did the other two studies. The outcomes are measured using self-report in the form of questionnaires which is subject to recall bias and/or social desirability bias with unknown effects on the outcome. However, unlike Boekeloo et al, these authors directly address the issue. They state that if participants' self-reports were biased, the intervention effects should be strongest among those participants with the greatest tendency to give socially desirable responses. They conclude that contrary to this, self-reported sexual behavior and changes in self-reported sexual behavior were unrelated to a standard measure of social desirability response bias and that this is consistent with at least 2 other studies.

Another limitation that this study shares with the other studies is its generalizability. The study setting was urban (Philadelphia, PA) and thus, generalizability to suburban and rural settings is questionable. The authors state that it is also unclear whether the intervention effects would be observed in white adolescents. However, since urban African American adolescents are considered to be a high-risk population for STIs and HIV, and happen to be our population of interest, finding a prevention strategy that specifically targets this population would be a useful tool in the fight against the spread of HIV infection.

In conclusion, a systematic review of the literature provides us with strong evidence that condom use is an effective way to reduce HIV transmission and that behavioral interventions can reduce sexual risk. However, the best published studies that have focused on behavior

change have only had modest results that are often short-term. Thus, new and innovative approaches are necessary to decrease the disparity in HIV/AIDS.

#### **IV. METHODS**

As mentioned previously, my choice to focus on social marketing programs is based on the limited success of past HIV prevention interventions in the past and the suggestion that a targeted approach may be more effective with at-risk or highly ostracized populations such as my population of interest: African American adolescents and young adults.<sup>14</sup> Thus, I performed a meta-evaluation of two identified HIV prevention interventions done in the U.S. that focused on African American adolescents and/or young adults to examine whether or not they had indeed used social marketing techniques and to determine the lessons learned from these interventions.

#### **INCLUSION CRITERIA**

The two programs included in this evaluation were identified using a systematic search of articles published after 1990 from the various different databases including Medline, CINAHL, PsychInfo, and Social Sciences Index databases. Limits included English language articles only and articles published after 1990. Key words used in the searches included *social marketing*, (this is also a MESH term), *condom use*, *cultural norms*, *STI prevention*, *HIV prevention*, and *contraception*. Articles including the following topics were reviewed: the use of social marketing to modify cultural norms about health, social marketing campaigns in Latin America that use machismo to promote condom use, cultural norms about condom use (African-American and Latino), condom use among these groups for STI prevention vs. contraception (which is more effective), any article that discussed the use of social marketing to increase condom use, and any article that discussed the use of social marketing with our target audience.



Specific inclusion criteria included: 1) programs that were found to have most (if not all) of the components of social marketing, 2) programs that included an evaluation component, 3) articles published in English, 4) articles published after 1990. According to a systematic review performed by Darcie Mersereau in the fall of 2003, only two such programs exist. These two programs were chosen because they were found to have most of the necessary components of social marketing, they were the only two programs to include an evaluation component, and they met the other inclusion criteria.

## EVALUATION QUESTIONS

The evaluation questions fall into two main categories: 1) those to evaluate the interventions using specific criteria to discern whether or not a program in fact used social marketing techniques, and 2) those questions regarding challenges and successes at each step of the intervention (design, implementation, and evaluation) to glean more general lessons learned.

I used the following “benchmarks”<sup>32</sup> proposed by Andreasen for identifying an approach that could, in his words, “legitimately be called social marketing”<sup>32</sup> to compose various questions for the data collection tool:

1. *Behavior-change is the benchmark used to design and evaluate interventions.*
2. *Projects consistently use audience research to (a) understand target audiences at the outset of interventions (i.e., formative research), (b) routinely pretest intervention elements before they are implemented, and (c) monitor interventions as they are rolled out.*
3. *There is careful segmentation of target audiences to ensure maximum efficiency and effectiveness in the use of scarce resources.*
4. *The central element of any influence strategy is creating attractive and motivational exchanges with target audiences.*
5. *The strategy attempts to use all four Ps of the traditional marketing mix; for example, it is not just advertising or communications. That is, it creates attractive benefit packages (products) while minimizing costs (price) wherever possible, making the exchange*

*convenient and easy (place) and communicating powerful messages through media relevant to – and preferred by – target audiences (promotion).*

6. *Careful attention is paid to the competition faced by the desired behavior.*

I used these benchmarks to create questions specific to social marketing techniques to discern whether or not each intervention used these techniques in their design, implementation, and evaluation and therefore, according to Andreasen could “legitimately be called social marketing.”

In addition to questions that were specific to social marketing techniques, I included questions to elicit more general lessons learned. Most of these questions were structured questions such as:

*Have any of the following methods been used to establish objectives?*

- 1) analysis of existing data*
- 2) literature review*
- 3) original needs assessment*
- 4) focus groups*
- 5) consultation with community leaders.*

I then included a more open-ended component such as: *Were any other methods used? If so, which ones?* I also included open-ended questions about the various aspects of the intervention including (but not limited to) questions about the project’s stated objectives, community involvement, challenges, factors that enabled success, and the transferability of elements at each stage of the program. All of the questions can be reviewed in the data collection tool.

## **DATA COLLECTION TOOL**

Please see Appendix A for the semi-structured interview tool used to assess the social marketing evaluation criteria (indicated on the tool as “Andreasen 1”, “Andreasen 2”, etc.) as well as other aspects of the project to determine strengths and challenges of each phase of the project: design, implementation and evaluation.

## DATA SOURCES

The intent of this program evaluation was to include both primary data collection and secondary data for each project:

- 1) Primary data: qualitative data was obtained through interviews with Principle Investigators (PIs) for each program using the semi-structured data collection tool, and
- 2) Secondary data: A review of program documents including published articles, progress reports, program description, program objectives or stated goals.

However, both PIs declined to send secondary data so this analysis of secondary data was limited to published articles. Each PI identified all the articles that had been published about their project. Thus, the analyses were based on the qualitative data obtained through the semi-structured phone interview with the PI for each project and on a systematic review of the published articles about each program.

## CONTACTING THE PROGRAMS

Each PI was initially contacted via emailed Introductory Letter (see Appendix B) and this was followed by a telephone call and/or email. The PIs were given a choice as to how they would like to give me their data. Each PI independently requested that the data collection tool be completed by telephone interview instead of merely filling out the form as a questionnaire and mailing it back to me so the information for each program was collected in this manner. I encountered many challenges with both PIs to set up the phone interviews. Despite delays with the interviews, both eventually took place and I was able to gather valuable information from each program PI.

## DATA ANALYSIS

I performed a systematic review of the published articles for each program and incorporated the information into the data collection tool for each. The following published articles were reviewed for each project:

### The APPLE Project

Santelli JS, Kouzis A, Hoover D, Polascek M, Celentano DD. Stages of Behavior Change for Condom Use: The Influence of Partner type, Relationship, and Pregnancy Factors. *Family Planning Perspectives*, 1996;28:101-107.:

Santelli JS, Davis M, Celentano DD, Crump AD, Burwell LG. Combined Use of Condoms with Other Contraceptive Methods. *Family Planning Perspectives*, 1995;27:74-78.

Santelli JS, Celentano DD, Rozsenich C, Crump AD, Davis D, Polacsek M, Augustyn M, Rolf J, McAlister AL, Burwell L. Interim Outcomes for A Community-Based Program to Prevent Perinatal HIV Transmission. *AIDS Education and Prevention*, 1995;7:210-220.

Polacsek M, Celentano DD, O'Campo P, Santelli JS. Correlates of Condom Use Stage-of-Change: Implications for Intervention. *AIDS Education and Prevention*, 1999;11:38-52.

Nebot M, Celentano DD, Burwell LG, Davis A, Davis M, Polacsek M, Santelli JS. AIDS and Behavioral Risk Factors in Women in Inner City Baltimore: A Comparison of Telephone and Face to Face Surveys. *J Epidemiology Community Health*, 1994;48:412-8.

Orr ST, Celentano DD, Santelli JS, Burwell LG. Depressive Symptoms and Risk Factors for HIV Acquisition Among Black Women Attending Urban Health Centers in Baltimore. *AIDS Education and Prevention*, 1994;6:230-236.

Santelli JS, Burwell LG, Rozsenich C, Augustyn M, Celentano DD, Rolf JE, Wallach R, Beverly B. Surgical Sterilization Among Women and Condom Use – Baltimore 1989-1990. *Morbidity Mortality Weekly Report, CDC*. 1992;41:568-575.

### The ACCESS Project

Futterman DC, Peralta L, Rudy BJ, Wolfson S, Guttmacher S, Rogers AS, and the Project ACCESS Team of the Adolescent Medicine HIV/AIDS Research Network. The ACCESS (Adolescents Connected to Care, Evaluation, and Special Services) Project: Social Marketing to Promote HIV Testing to Adolescents, Methods and First Year Results From a Six City Campaign. *J of Adolescent Health*, 2001;29S:19-29.

I then emailed each program PI with their respective data collection tool for their review. Any changes or clarifications to the information were made during the interviews. Each interview lasted approximately one hour. I took detailed notes during each interview on a copy of the data collection tool for that project. Because the majority of the questions were structured and only a

few questions were open-ended, this was not difficult. After each interview, I typed my hand-written notes into the data collection tool. I then performed triangulation on the information in the published articles and the interview data to arrive at my results.

## **V. PROGRAM DESCRIPTIONS**

In this paper, I evaluate two programs: 1) The AIDS Prevention for Pediatric Life Enrichment (APPLE) project, a five-year effort in a predominantly African-American community in Baltimore, MD, and 2) The ACCESS Project: “*HIV. Live with it. Get Tested!*” campaign that was initially developed in NYC and later assimilated in five other large urban centers. I give a brief description of each project below and a comparison table of the project components can be found in Appendix C, Figure 1.

### **THE APPLE PROJECT**

The AIDS Prevention for Pediatric Life Enrichment (APPLE) project is a community-based program to prevent perinatal HIV infection by preventing infection in women. This project was a five-year effort that took place in a predominantly African American community in Baltimore. The primary behavioral objective was to increase the use of condoms by community members. The primary prevention component combined small media with interpersonal communication (five hundred face-to-face interviews by street outreach workers) and the survey instrument queried HIV knowledge, attitudes, and self-reported risk behaviors as well as awareness of the project materials and messages.

The goal of the small media campaign was to produce and publicize a few basic HIV risk-reduction messages (e.g., condom use) in the form of role model stories. This project targeted women of childbearing age as the primary audience of the health-promotion materials, but the small media were designed to model social acceptance of condom use by both females

and males. The primary behavioral change outcome assessed in the study was reported use of a condom at last sexual intercourse. Secondary behavioral changes included inquiring as to a sexual partner's STI history, rejecting sex for fear of STI or HIV transmission, and avoiding sexual encounters when condoms were not available.

## **THE ACCESS PROJECT**

The ACCESS (Adolescents Connected to Care, Evaluation, and Special Services) project used a social marketing approach to promote HIV testing to adolescents. The “*HIV. Live with it. Get Tested!*” campaign was used to identify and link to care, the thousands of HIV infected youth who are unaware of their HIV serostatus. The authors state that the campaign is “based on theories and practices of social marketing and the premise that direct, relevant promotion of HIV testing to youth can ‘normalize’ HIV testing. In a publication about this study, the stated objectives of the project were to change youth attitudes about HIV testing and promote more routine testing practices to health providers with the project goal of improving HIV counseling, testing and care among at-risk youth.

Project ACCESS was launched within the Adolescent Medicine HIV/AIDS Research Network (AMHARN) as a multi-city program in 1999 and was repeated and expanded in 2000. After two years of piloting in New York City, the project was expanded to five more cities with high HIV rates in youth: Baltimore, Los Angeles, Miami, Philadelphia, and Washington D.C. The lead agency in each city was a comprehensive adolescent HIV medicine and research program participating in AMHARN. In the ACCESS project, the quantitative outcomes included the number of calls to the local telephone hot lines, numbers of youth receiving HIV counseling and testing at participating sites, and numbers of positive youth identified during the period.

## VI. RESULTS

In this section, I compare and contrast the two programs by reporting my results using the same general organizational structure as the data collection tool with the following main sections: Objectives and Design, Implementation, and Evaluation. A table of each section of results is also provided at the beginning of each section, organized by subheadings and key summary points for each project. Most of the results that relate to the Andreasen criteria appear in the Objectives and Design section and these components will be identified in the tables as “(A1)”, “(A2)”, etc. In the text, the criteria will appear as they were written by Andreasen and introduced in the methods section.

### OBJECTIVES AND DESIGN

See Table 1 (below) for the results of the Objectives and Design section.

**Table 1: Objective and Design Results**

Subheading	APPLE Project	ACCESS Project
<b>Stated Project Objectives</b>	“To prevent perinatal HIV transmission in a predominantly AA community in Baltimore”	“To change youth attitudes about HIV testing and promote more routine testing practices to health providers with the project goal of improving HIV counseling, testing and care among at-risk youth.”
<b>Focus of Change (A1)</b>	Behavior change was a goal. (A1) Focus on individual behavior.	Behavior change was a goal. (A1) Sought to impact behavior on multiple levels: 1) individual level 2) community norms 3) policy
<b>Behavioral Theories</b>	Social Learning Theory	Social Marketing Theory Social Learning Theory Exchange Theory Health Belief Model

<b>Subheading</b>	<b>APPLE Project</b>	<b>ACCESS Project</b>
<b>Target Populations</b>	“women at risk for HIV” e.g., AA women, and “young women” “under 35 years of age”	“youth who are disproportionately infected with HIV: sexually active youth of color in high seroprevalence communities, particularly heterosexual females and homosexual/bisexual males” “adolescence” was defined as ages 13 to 24
<b>Segmentation of Target Population (A3)</b>	AA females with segmentation for analysis by age, education, marital status, ever pregnant, employment status, and telephone service.	Three priorities regarding segmentation (listed in order of priority): 1) age 2) urban 3) youth of color
<b>Formative Research (A2a)</b>	Analysis of existing data Literature reviews Focus groups Interviews Needs assessment Consultation with community leaders Community mapping	Analysis of existing data Literature reviews Focus groups Interviews with providers Consultation with community leaders
<b>Pretesting of the Interventions (A2b)</b>	Each product was tested prior to use via focus groups.	The advertising concepts were tested for local relevance in each city through focus groups and feedback from youth.
<b>Motivational Exchanges (A4)</b>	Thought was given to creating attractive and motivational exchanges with target audiences.	Thought was given to creating attractive and motivational exchanges with target audiences.
<b>Social Marketing Theory: The Four Ps (A5)</b>	All four Ps were incorporated. Promotion was most important. Products were secondary.	All four Ps were incorporated. Promotion was most important. Products were secondary. Price – it was important to offer free HIV testing. Positioning, the fifth P, was also very important.
<b>Competition (A6)</b>	Thought was not given to the competition faced by the desired behavior.	Thought was given – they were aware that they were up against the notion of sex without consequences
<b>Communication Channel Use</b>	Community surveys (telephone and street surveys) were used to choose the communication channel to communicate with their target population.	Ad agency picked radio stations with the right (target) demographic population.
<b>Community Involvement</b>	Involved in planning and research phase of the campaign via an advisory group	Community was not involved until the implementation phase.
<b>Barriers to Involving the Community</b>	Competition from other projects in the area, e.g., teen pregnancy Concern about “research”	Very directed project (no room for input) created resentment among some of the local agencies



Subheading	APPLE Project	ACCESS Project
<b>Project Maintenance</b>	This was not a long-term goal since this was always a demonstration project.	This was a long-term goal, but they were not sufficiently funded to do this.
<b>Pilot Testing</b>	Pilot was not tested in its entirety.	Pilot was tested, but evaluation was not completed.
<b>Design Challenges</b>	1) Overcoming denial of HIV 2) Finding creative people to make marketing materials 3) People who are good with street outreach are not necessarily good employees	1) Forging new ground made it difficult to get buy-in from the funders 2) Difficult to get buy-in from local agencies due to resentment 3) Staffing challenging as NY-based staff ran the national campaign as well as the one in the Bronx
<b>Factors that enabled Successes</b>	1) The community was supportive 2) The timing was good	1) The idea was innovative 2) They had support from key people – ad agency, funding agency 3) They worked with people who knew the population and were committed to making a difference
<b>Transferability</b>	Small media and street outreach	All of the design (since this was designed to roll out to other cities)
<b>Design Changes</b>	Drop the case management piece	Push for longer funding periods

### Stated Project Objectives

The stated objective of the APPLE project was “to prevent perinatal HIV transmission in a predominantly African American community in Baltimore” while the stated objective of the ACCESS project was “to change youth attitudes about HIV testing and promote more routine testing practices to health providers with the project goal of improving HIV counseling, testing, and care among at-risk youth.” The campaign designers of the APPLE project did not report objectives in a measurable (quantified) format because they “just wanted to see a difference, to increase condom use.” In contrast, the campaign designers of the ACCESS project did report objectives in a measurable format. These designers had process measures including 1) the number and type of organizations participating in each level of the local campaigns, 2) youth participation as outreach workers or in campaign events, and 3) venues and the extent of message dissemination through community outreach and paid advertising. The quantitative outcomes

included the number of calls to the local telephone hot lines, numbers of youth receiving HIV counseling and testing at participating sites, and numbers of positive youth identified during that period.

### **Focus of Change**

Both projects met the first Andreasen criterion in that they both had a behavior change as one of their benchmarks used to design this intervention. Both projects acknowledged that individual behavior and community norms and activities were the focus of change in their campaigns. But the APPLE project emphasized individual behavior change. The ACCESS project sought to impact multiple levels: 1) individual behavior – increased HIV testing by individuals, 2) community norms and activities – to make HIV testing a normal part of adolescent health, and 3) policy – “we did a lot of outreach to the media.” The PI for this project told me that they wanted to influence key decision-makers (politicians, providers, agencies) that free HIV testing was important. She described how she had been trying to get free HIV testing in the NYC area but the local agencies and politicians did not want to do this since “it was still a politically touchy subject.” So instead of trying to convince them to do it, they decided to implement a program that would “just do it.” They wanted to influence people “from above and below.” She said, “we thought it would be that much more effective if they heard from us that we thought they should be offering free HIV testing and then read an article in the New York Times about it.”

### **Behavioral Theories**

Both projects used behavioral theories to guide the formation of their objectives and to inform the design of their projects. According to the PIs, both projects relied on Social Learning Theory. The ACCESS project also noted use of Exchange Theory and the Health Belief Model.

But the main theory that was used for the project design of the ACCESS project was Social Marketing Theory. The main message was to link sex to HIV risk in a youth-oriented way with these messages: 1) use condoms, and 2) get tested.

### **Target Populations**

The target groups of each intervention were similar and aimed to impact those populations at high-risk for HIV infection. The APPLE project targeted their campaign to “women at risk for HIV” such as African American women, and focused their prevention activities on “young women” who they defined as “women under 35 years of age.” This definition was chosen, instead of “women of reproductive age,” to capture those on the younger end of the spectrum who may be sexually active, but not yet menstruating. This age group was chosen because this was perceived to be the highest risk category. The ACCESS project defined their primary target group as “youth who are disproportionately infected with HIV: sexually active youth of color in high seroprevalence communities, particularly heterosexual females and homosexual/bisexual males.” This group chose the standard definition of adolescence as their target age group, ages 13 to 24, since “they are a very vulnerable population in terms of HIV and they are not receiving the messages that are out there targeting adults.”

The APPLE project defined a secondary target group as African American men because “they’re the ones using the condoms.” The ACCESS project defined a secondary target group as health care providers. This group was added after the 1999 pilot from feedback received from youth and the providers themselves. This secondary audience was chosen to explore their practices in terms of offering HIV testing and their perceived barriers to providing HIV counseling and testing services to adolescents. This group was also chosen “to recruit service outlets.” This idea stemmed from the theory of market readiness – that it is not enough just to

make youth aware, but providers must also remember to offer free HIV testing to adolescents who come to them seeking care. Thus, service outlets must be identified and/or created.

### **Segmentation of Target Population**

The third Andreasen criterion requires that *there is careful segmentation of target audiences to ensure maximum efficiency and effectiveness in the use of scarce resources*. In terms of segmentation, all participants in the APPLE project were African American females and segmentation for analysis was by age, education, marital status, ever pregnant, employment status, and telephone service. However, the participants were not segmented in terms of the messages delivered. The segmentation was done in this manner to identify women at highest risk and compare the two communities. For the ACCESS project, age was the number one segmentation. Urban was second prioritized segmentation and youth of color was the third. The segmentation was done in this manner to target those who are disproportionately infected with HIV.

### **Formative Research**

The second Andreasen criterion has three parts. The first part of the second Andreasen criterion requires that *projects consistently use audience research to understand target audiences at the outset of interventions (i.e., formative research)*. Both projects used audience research to understand the target audiences. The APPLE project used focus group discussions and interviews to inform their role model stories. Focus group information was also used to inform the basic approach to the intervention. An example of this is that the project staff started with Tupperware parties as a venue for HIV risk reduction and, according to this PI, in one of the focus groups the women responded, “We don’t do groups.” So they changed the intervention to street outreach and adopted a communication approach using small media instead. The ACCESS project used

focus groups, interviews with providers and literature reviews to inform the design of their project.

The APPLE project used various sources of information to establish their project objectives including analysis of existing data (e.g., the HIV data), literature review, original needs assessment, focus groups, and consultation with community leaders. They also worked with the medical care community, community health centers and public school principals. Another form of formative research that was used was the Tony Whitehead community mapping of social structures in the community. The headquarters of this intervention was in the basement of a local African American church. The ACCESS project used many of the same sources and methods including analysis of existing data (e.g., on the number of kids tested), literature reviews (on social marketing and HIV literature), focus groups and consultation with community leaders. They also used local health department information.

### **Pretesting of the Interventions**

The second part of the second Andreasen criterion requires that *audiences consistently use audience research to routinely pretest intervention elements before they are implemented*. Both PIs reported that audience research was used to routinely pretest intervention elements before they were implemented. The APPLE project PI stated that each product was tested prior to use via focus groups. This method was chosen over survey methods due to the rapid turn-around time that can be achieved with focus groups. The published article about the ACCESS project states that “the advertising concepts were tested for local relevance in each city through focus groups and feedback from youth and adjusted accordingly.” The PI for this project elaborated on this and gave the example that in Miami, “hittin’ it,” a phrase used in the ACCESS project materials, was interpreted by the kids as domestic violence whereas this is a phrase to

indicate sexual activity in New York City. So there was an issue with distinguishing local youth culture from national youth culture. Thus, each time a new campaign rolled out in each new city, focus groups were used to test the messages. In addition to experimental testing of alternative message formats, other methods used were informational consultation with community members. I was told by this PI that each city knew who their partners would be; there was a local coalition of agencies and providers who had been doing work in this area for at least five years. Thus, in each city, there was a coalition that the project consulted.

The third part of the second criterion is discussed in the evaluation section.

### **Motivational Exchanges**

The fourth criterion proposed by Andreasen states that *the central element of any influence strategy is creating attractive and motivational exchanges with target audiences*. Both projects reported that thought was given to creating attractive and motivational exchanges with their target audiences. The ACCESS project PI stated that “much attention was given to framing promotional materials in the “‘language’ of urban youth.” To give youth a voice, they held local youth speak-outs at each project site. They would usually involve a local theater group that would do a performance on a “hot issue.” Then a moderator would ask the kids to respond to this. The experts on stage, the youth panelists, were kids and local kids were also in the audience. Any adults that were present sat in the audience. In addition to giving the kids a voice, these events were also used as an organizing tool for local agencies and to get more media attention. These speak-outs were done in New York City each year and in each of the other cities at least once. They also published a zine (a youth-friendly magazine), *The Deal*, which is now in its 4<sup>th</sup> edition and was distributed to about 250,000 people this year.

## Social Marketing Theory: The Four Ps

The fifth Andreasen criterion requires that the intervention strategy *attempts to use all four Ps of the traditional marketing mix; for example, it is not just advertising or communications. That is, it creates attractive benefit packages (products) while minimizing costs (price) wherever possible, making the exchange convenient and easy (place) and communicating powerful messages through media relevant to – and preferred by – target audiences (promotion).* When asked which of the four Ps was most important in the design of this campaign, both project PIs cited *Promotion – communicating powerful messages through media relevant to and preferred by target audiences.* The PI for the ACCESS project explained “lots of places offer free HIV testing but promotion in their [adolescents] language had not been done. The secondary P for both was their *Products – creating attractive benefit packages.* The ACCESS project partnered with marketers to develop products specifically for their target group. Another P that was mentioned by the ACCESS PI was *Price* – that it was important to them to offer *free* HIV testing.

The fifth P, *Positioning – the location of the product relative to other products and activities with which it competes*, was “very important” to the ACCESS project. The PI explained, “We wanted to make it ‘cool.’ We accepted that kids were having sex and the fact that adults didn’t understand the messages was a ‘wink’ to the kids.” She also stated several times during my interview with her that they were very aware that they were “up against this notion of sex without consequences” as portrayed by the media and that they wanted to “speak to youth in their own words.” The published article about their project stated, “The analysis of communication patterns was done to promote messages in the venues where youth learned other cultural values.”

## **Competition**

The sixth and final criterion requires that *careful attention is paid to the competition faced by the desired behavior*. The APPLE project reported that they did not give thought to the competition faced by the desired behavior. The ACCESS project stated that they did consider competition; they “were aware that [they] were up against this notion of sex without consequences.”

## **Communication Channel Use**

In both projects, campaign designers obtained information from target audiences about their communication channel use. The APPLE project PI stated that they asked a lot about media in the initial community surveys (telephone and street surveys). The ACCESS project hired an ad agency (pro bono) that picked stations that had the right demographic population. Radio was chosen for its popularity with the target population as well as due to cost concerns.

## **Community Involvement**

The APPLE project involved community citizens and community leaders in the planning and research phase of the campaign. The APPLE project had an advisory group that had to approve all their materials. The PI for this project reports that this strategy was somewhat successful in that this advisory group did not tell them what to do, but told them how to interact with the community. The ACCESS project did not involve community citizens and community leaders until the implementation phase of the project.

## **Barriers to Involving the Community**

Both projects experienced barriers involving the community. The PI of the APPLE project cited competition from other work in the area such as preventing teen pregnancy and preventing drug use. There was also concern about it being “research.” The PI stated, “many



communities had negative experiences with research. The community felt rejected by research. [So to avoid this...] we chose an area that was not the typical cachement area for Hopkins [research].” The ACCESS project PI stated that their program was “very directed” and there was “not a lot of room for input.” She stated that this did result in a lot of resentment and she perceived that the community partners didn’t put as much into the project that they could have because of this resentment.

### **Project Maintenance**

The APPLE project stated that their campaign designers did not identify maintenance of the intervention as a long-term goal since this was always a demonstration project. The ACCESS project stated that their campaign designers identified maintenance of the intervention as a long-term goal but that they were not sufficiently funded to do this.

### **Pilot Testing**

The APPLE project did not pilot test the intervention in its entirety. The PI for this project explained that it was “an iterative process” and that they continually improved street outreach with their quality assurance mechanism. The ACCESS project PI stated, “we did the best we could but we didn’t do as much as we would have liked. The pilot was tested, but the evaluation was not completed.”

### **Design Challenges**

Both projects identified various challenges that they faced in designing this program. The PI for the APPLE project identified three main challenges: 1) overcoming denial of HIV in the African American community in that time period, 2) finding creative people to make marketing materials, and 3) people who are good with street outreach are not necessarily good employees. (Note: I would consider this last point an implementation challenge, but this is how

this PI responded to the question.) The PI for the ACCESS project identified several challenges as well. She stated that they were forging new ground so getting buy-in from the funders was a challenge. It was also difficult to get buy-in from the agencies due to resentment over the centralized approach of this project (the main project staff was all in New York). Another challenge for the New York-based staff was that they were running the national campaign as well, so they weren't able to put enough work into the project in the Bronx.

### **Factors that enabled Successes**

The PI for the APPLE project identified several factors that enabled them to be successful in the design of this program. He stated that 1) the community was supportive, and 2) the timing was good - condom use increased from baseline to Year 2. He felt that if this had been done later, they probably wouldn't have had this impact. The PI for the ACCESS project also identified several factors that enabled them to be successful. She stated that 1) the idea was innovative, 2) they had support from key people – from the ad agency, the funding agency, and 3) that they worked with people who knew the population and were committed to making a difference.

### **Transferability**

The PI for the APPLE project felt that the small media and the street outreach components could be transferred to other contexts or communities. But the intervention community was also somewhat unique, more specific to the setting of this project and not transferable. The intervention community was fairly self-contained, surrounded by water and expressways. The PI for the ACCESS project thought that all of the design of this project could be transferred to other communities. She explained that since this program was designed to roll out to other communities, they had this in mind.

## **Design Changes**

The APPLE project also included a case management piece through two local health care providers. They initially thought these two providers were the main providers used by the community. They later discovered that people went all over the city for care, so this was not as effective as they had hoped. If this PI were to design a similar program, he would not do the case management piece. He stated: “It’s hard to integrate the community-level and the clinic-level.” The PI from the ACCESS project offered that she would push for longer funding periods and more staff. She also added: “You need to make sure you’re working with key people.”

## **IMPLEMENTATION**

See Table 2 for the results of the Implementation section.

## **Project Products**

Both projects produced educational/behavioral products and material products. The APPLE project provided social reinforcement via the outreach workers and their material products included comic books, newsletters, pamphlets, and condom envelopes. (These could also be considered promotional products.) The ACCESS project included educational/behavioral and material products (palm cards with the HIV hotline number and the project name, condoms, pens and movie tickets), but also included services (HIV testing) and promotional products (media messages).

## **Cost Competition & Incentives**

In terms of cost, neither project used monetary incentives to overcome the costs of recommendation adoption. The ACCESS project PI stated that providing *free* HIV testing was both a concern and a priority since the project designers understood that many of the at-risk youth were from low-income communities. But in social marketing theory “cost” does not only

**Table 2: Implementation Results**

<b>Subheadings</b>	<b>APPLE</b>	<b>ACCESS</b>
<b>Project Products</b>	Educational/behavioral products (social reinforcement) Material products (comic books, newsletters, pamphlets, condom envelopes)	Educational/behavioral products (palm cards with HIV hotline number) Material products (condoms, pens, movie tickets) Services (HIV testing) Promotional products (media messages)
<b>Cost Competition &amp; Incentives</b>	No monetary incentives Social recognition Personal reinforcement	No monetary incentives Free HIV testing Material rewards for testing Personal reinforcement
<b>Distribution Mechanisms</b>	Community outreach workers Health providers Commercial outlets	Community outreach Health providers/centers Commercial outlets Schools Community events Youth agencies Youth recreational sites Radio
<b>Community Involvement</b>	Social endorsement in small media materials. Community volunteers distributed materials	Service outlets were recruited Community mobilization meetings held
<b>Implementation Challenges</b>	Managing the street outreach workers	Resentment by local project staff (no input into project) Uncertain project funding year-to-year Getting data from sites
<b>Factors enabling Success</b>	Expert consultancy	Use of ad agency to devise the messages Use of PR agency to devise the distribution strategy
<b>Implementation Changes</b>	Would not implement the clinic-based component	More staff, more funding, more time

refer to monetary costs but includes the costs of adopting new health-seeking behaviors. Both projects used other incentives to overcome the costs of adopting new behaviors. The APPLE project used social recognition and personal reinforcement through the street outreach workers. The ACCESS project also wanted to make this less “costly” in a social sense by changing the social norms about HIV testing and making it a norm. The ACCESS project also offered material

rewards such as palm cards (with the HIV hotline and the project name), condoms, pens (with the program name) and movie tickets as an incentive to come back to get testing results. They also used personal reinforcement via “a lot of positive energy” at the testing sites.

### **Distribution Mechanisms**

The APPLE project products were distributed through community outreach workers, health providers, and commercial outlets, e.g. distribution of comic books at local barbershops. This method of distribution was chosen due to a combination of other communications and recommendations from the CDC; they recommended a small media approach based on Social Learning Theory. The ACCESS project used schools, community events (e.g. town hall meetings), community outreach, commercial outlets (e.g. popular radio stations, cable networks, websites, youth publications, and neighborhood stores that the kids frequent) and youth agencies and recreation sites. These methods of distribution were chosen, per the PI, “because that’s where the kids are.” This project also used mediated distribution mechanisms including broadcast media (radio and video) and print media (youth friendly magazine, palm cards, mass transit/outdoor advertising). Each city also built a network of youth-friendly health centers (places that were already providing care to adolescents) that agreed to provide free counseling and testing services. These mechanisms were chosen after an analysis of communication patterns of the target audience and with budgetary constraints in mind.

### **Community Involvement**

The APPLE project used social endorsement from the community in their small media materials. These materials contained pictures of and endorsements by community residents. Community volunteers distributed materials as well and served as street outreach workers. For the ACCESS project, community members were recruited during the implementation phase as

service outlets in that they were the ones that would offer the free HIV testing. They held community mobilization meetings; they invited partners in for three meetings prior to the *Get Tested!* week. They gave them free materials in exchange for data (for the evaluation). When asked how “the community” was defined, this PI responded that in their view the community had three layers: 1) health providers offering the free testing, 2) the community-based youth agencies that were already working with youth such as Planned Parenthood, local recreational programs, the public library, local programs such as Better Bronx for Youth, and 3) the youth themselves (recruited through these agencies).

### **Implementation Challenges & Successes**

According to the project PI, the main challenge encountered by the APPLE project was managing the street outreach workers. But expert consultancy enabled them to understand the community outreach and the nature of behavior change and this contributed to the successful implementation of this project. The ACCESS project encountered some difficulty when project staff realized they couldn't change the intervention or give input. Other challenges included the uncertain project funding year to year and getting data back from various sites; some of the largest sites never sent their data. According to this project PI, they had two essential outside collaborators that contributed to the successful implementation of this project: 1) the ad agency (pro bono) that came up with the messages, and 2) the health marketing PR agency (paid) that helped with the distribution strategy.

### **Implementation Changes**

As previously mentioned, the APPLE project would not implement a clinic-based component of their intervention if they had an opportunity to do it again. The PI from the

ACCESS project nicely summed up the changes she would make if she were to implement a similar program: more staff, more funding, and more time.

## EVALUATION

Please see Table 3 for the results of the Evaluation section.

**Table 3: Evaluation Results**

<b>Subheadings</b>	<b>APPLE</b>	<b>ACCESS</b>
<b>Evaluation Characteristics</b>	Annually over 3 years via annual surveys and a summative evaluation	Evaluation twice – after 1 <sup>st</sup> year in NY and 2 <sup>nd</sup> year after national roll-out Both process and outcome evaluations No summative evaluation
<b>Evaluation Methods &amp; Design</b>	Quasi-experimental model Time series design Focus groups Surveys	Advertising model Impact monitoring model Surveys
<b>Focus of Evaluation</b>	Behavior change: 1) Self-reported behaviors (e.g., condom use) 2) Self-efficacy  Exposure to APPLE materials Intention to change Knowledge gain Attitude change	Behavior change: 1) Number of calls to hotline 2) Number of people receiving HIV testing  Press Coverage Size of Coalitions in each city Knowledge gain Attitude change
<b>Cost-Effectiveness</b>	Did assess – campaign was not very expensive, but evaluation was.	Did not make efforts to assess.
<b>Evaluation Challenges</b>	1) the validity of some of the information 2) replacement of initial evaluation coordinator	1) challenges with the evaluator 2) limited budget 3) getting data from the sites
<b>Factors that Enabled Success</b>	“A lot” of support with the evaluation (Hopkins SPH)	Sites that did share data were highly motivated to do so
<b>Changes based on Evaluation</b>	No changes to project based on the evaluation	No changes to project based on the evaluation

## **Evaluation Characteristics, Methods and Design**

The APPLE project was evaluated via annual surveys over 3 years in both communities. The following evaluation models were employed for the APPLE evaluation: quasi-experimental model and a time series design. A summative evaluation was conducted on the APPLE project to evaluate the intervention's impact. Although an interim report showed that after two years of the intervention, the highest rate of condom use was among women associated with the greatest program exposure<sup>33</sup>, the final report did not show much impact on behaviors and thus was not published. Even during the first two years, condom use at last sexual encounter rose in both communities, but was significantly higher in the intervention community. Thus, the lack of impact at the end of the intervention may have been due to fact that the control community caught up to the intervention community in terms of condom use. This is a common complication of projects that aim to change social norms about an issue. If society's norms are already shifting, it is sometimes challenging to show that the intervention itself is having an impact.

The ACCESS project contracted an independent evaluation team to conduct both process and outcome evaluations of the campaign. This project was evaluated twice – after the first year in New York City and the second year after the national roll-out. The ACCESS evaluation employed an advertising model and an impact monitoring model. In terms of using audience research to monitor interventions as they were rolled out, the ACCESS project did street intercept interviews but couldn't do more, including a summative evaluation, due to lack of funding.



## **Focus of Evaluations**

Behavior change was a focus for both projects, but neither required a particular amount of change to consider it truly a change. The APPLE project monitored exposure to their materials and the ACCESS project measured calls to the hotlines and the numbers of people receiving HIV testing. Neither campaign reported analyses of the target audience environment to identify supportive and unsupportive elements. But both projects carried out environmental analyses. The APPLE project used focus groups and survey research while the ACCESS project relied on survey research. Both project evaluations measured three of the same outcomes: knowledge gain, attitude change and self-reported behaviors. The APPLE project also measured self-efficacy, intention to change and awareness of project materials and messages via self-report. The ACCESS project also measured observed objective behavior change (hot line calls and HIV testing and counseling), press coverage and the size of the coalitions in each city.

## **Cost-effectiveness**

The APPLE project made efforts to assess the campaign cost-effectiveness and the PI reported that they determined that the campaign itself was not very expensive, however, the evaluation was. The ACCESS project did not make efforts to measure cost-effectiveness.

## **Evaluation Challenges & Successes**

The APPLE project identified several challenges in evaluating this program including: 1) the validity of some of the information since “everybody was jumping on the condom use bandwagon,” and 2) they had to replace the initial evaluation coordinator. The initial person in this position was described as an academic who wanted to evaluate things they were not in fact doing. The ACCESS project had similar difficulties with their evaluator. Other challenges to this

evaluation were a limited budget and getting data back from the sites. Most agencies already collect this data so this was just an issue of getting them to share this information.

Both project PIs identified factors that made their evaluations successful. The APPLE project had “a lot of support” with the evaluation and that “the Hopkins School of Public Health made it easier to find people to assist with the evaluation.” The ACCESS project reported that the sites that *did* share data were highly motivated to share their results.

### **Changes Based on Evaluation**

Neither project PI would make any changes to their overall project design based on their evaluation results. As discussed previously, the APPLE project would drop the clinic-based component of their intervention and they would work harder for better saturation in the community. He would not change anything about the evaluation. The PI for the ACCESS project specified that she would implement a better phone system for their HIV hotline and that she would like to figure out a way to motivate people who called the hotline to also get tested for HIV. She also wanted to explore possible incentives to get the data in from the sites.

### **FINAL WORDS OF WISDOM**

At the end of our interview, I asked each project PI if there was anything else that they would like me to know about any aspect of their project. The PI of the APPLE project expressed that it is difficult to know how to maintain the research design. In his project, the two communities were geographically isolated so they were able to look at exposure in the non-intervention community. But he stated that he is aware that this is not always possible.

The ACCESS PI wanted me to know that they were extremely ambitious “going from a practice-based program in NY to other cities” but that they needed more staff to do this and because of the centralized project design and staff, they received mixed reviews by some of the

local agencies about not being able to give more input. Thus, there was some resentment. She also stated that “you *have* to work with professionals in the field [of marketing]. You have to have the right partners. Choosing effective partners is not easy. Some people felt entitled to be at the table and then contributed nothing.” To illustrate this, she said that in terms of the coalitions, initially they felt that bigger was better and thus, they measured success by the size of the coalitions. But, in fact, they learned that you need *effective* partners in order to be successful.

## **VI. DISCUSSION**

### **LESSONS LEARNED**

#### **Overview**

These two projects were very different and yet shared important similarities. The APPLE project was a smaller project in two geographically isolated communities in the same city. This intervention relied on street outreach workers to deliver small media items and had a focus on increasing condom use as a way to prevent HIV infection. The ACCESS project was a much larger project that was first a pilot program based in the Bronx, NY and then expanded to five other cities nationwide. This intervention was a multi-level approach with an emphasis on promotion of HIV testing and counseling. However, both projects were similar in their overall goal of reducing HIV infections, their use of social marketing techniques, their focus on high-risk populations for HIV, and their desire to customize their intervention messages to that population. Important barriers experienced by both projects included overcoming denial of HIV in these communities, finding the right partners to work with at each step of the intervention (design, implementation and evaluation), interfacing effectively with the community, securing adequate funding, and implementing a successful evaluation of the project.

## **Andreasen's Criteria**

Both projects used behavior-change as a benchmark to design their intervention and for the evaluation (Andreasen 1), but neither required a particular amount of change (quantitatively) to consider it a true change. Both projects used audience research to understand their target audiences (Andreasen 2a). Audience research was used by both projects to routinely pretest intervention elements before they were implemented (Andreasen 2b). Neither used audience research to monitor interventions as they were rolled out (Andreasen 2c). Careful segmentation of target audiences was performed to ensure maximum efficiency and effectiveness in the use of scarce resources (Andreasen 3). Both projects explained their segmentation based on their desire to focus on those populations at high-risk for HIV or those disproportionately affected by HIV.

Both PIs reported that thought was given to creating attractive and motivational exchanges with target audiences (Andreasen 4). Both projects considered the four Ps (Andreasen 5) in their marketing strategy and the ACCESS project also considered the fifth P, positioning. Promotion was the most important P for both projects with Products as the second most important (Andreasen 4). The ACCESS project placed more of an emphasis on competition faced by the desired behavior (Andreasen 6) than did the APPLE project. Overall, both projects met most of the Andreasen criteria (APPLE: 5/6, ACCESS: 6/6) for identifying an approach that could legitimately be called social marketing.

But there are other, more global lessons that can be learned from both of these projects that extend beyond the evaluation of each as a legitimate social marketing project. I discuss these aspects below.

## **Finding effective partners**

In terms of finding the right partners, the APPLE project found it difficult to identify people to create marketing materials and I imagine that this is a common problem with social marketing interventions. The ACCESS project PI also recognized this as an important aspect when she stated that you “must work with people in the profession [marketing].” If you truly want your social marketing intervention to be based on the principles of marketing then it follows that you would need experts in this field to contribute to the project design. This project chose to hire both an ad agency and a PR firm to assist with their efforts. These agencies offered technical assistance not only to help create the customized messages but also to identify the most appropriate methods of distribution.

## **Knowing your population**

The ACCESS project design also benefited from working “with people who knew the population.” It seems so obvious that the success of a social marketing intervention relies heavily on knowing your population. This is what marketers do to sell products and this is what we need to do to appropriately customize our public health messages to those disproportionately affected by disease. When the APPLE project realized that their participants were not primarily receiving care from the two providers in the community, they discontinued the clinic-based component of their intervention. This provides us with an example of the need for an iterative approach to knowing your population. Before the intervention is implemented, project components should be pre-tested. As the intervention is being rolled out, evaluate various phases of the intervention to see if it’s working and to improve the intervention as needed. This iterative aspect of feedback and evaluation to improve the intervention is central to social marketing theory.

## **Effective interfacing with the community**

It appears that each project defined “the community” differently. The APPLE project seemed to refer to the community in which their participants lived. The ACCESS project referred to community as multi-tiered and included their health care providers and members of their coalitions as well as the youth themselves. Although the definition of community can differ from project to project, it is essential that all stakeholders in a given project agree with that project’s definition of their community and who they are trying to impact with their intervention.

Just as there are different definitions of community, there are different definitions of and differing levels of participation by citizens and communities. In her much-cited article published in 1969, Arnstein<sup>34</sup> asked “What is citizen participation and what is its relationship to the social imperatives of our time?” She illustrated the gradations of citizen participation through the eight rungs in a Ladder of Citizen Participation. The eight rungs spanned from nonparticipation (such as manipulation) at the bottom through tokenism (informing and consultation) in the middle all the way up to levels where citizens have degrees of power (such as partnerships, delegated power, and citizen control). The methods of communicating with a community and the level of their participation requested from them in a given project can profoundly impact a project’s ability to create buy-in from the community and ultimately impact the success of the intervention. The APPLE project had concerns about their project being viewed as “research” since communities in Baltimore had some negative experiences with researchers. So they choose communities that were out of the traditional catchment area for the local research institution. The ACCESS project experienced some resentment by local agencies because their project had a centralized design and staffing, and the local groups were not able to

give any input into the design of the project. The PI for this project expressed that she felt this resentment affected their project outcomes and that they could have done better.

Regardless of their definitions of community and the levels of community participation, many projects encounter challenges when interfacing with communities. This can be due to mistrust of research as in the case of the APPLE project or due to lack of cooperation with data collection from community sites as in the case of the ACCESS project. Even when the intent is present, it is difficult to know how to partner effectively with the community. The APPLE project PI identified the management of the outreach workers as the main challenge of this project and stated that “people who are good with street outreach are not necessarily good employees.” In addition to their difficulties with data collection, the ACCESS project learned an important lesson about coalitions: bigger coalitions are not necessarily better – effective coalitions are.

We must learn to face these challenges because buy-in and support from the community are essential. The APPLE project PI stated that one factor that enabled them to be successful was that the community was supportive. The APPLE project was able to solicit community endorsements and used these to build support of their project. Creating buy-in from the community early in the project, such as in the design phase, would help to avoid the resentment that ACCESS project encountered. There are methods and approaches to interfacing effectively with the community such as community-based participatory research (CBPR). But it is difficult to determine how to create an intervention that is replicable (as is often desired by funding agencies) but also innovative enough to still be able to get input from the community at the design phase.

## **Securing adequate funding**

Securing adequate funding is a huge challenge for most projects. Both projects mentioned limitations due to lack of funding. Thus, it is necessary to create buy-in from funding agencies as well as the community, especially when forging new ground. Ideally, projects would secure longer-term funding at the outset of the project so that the project can be iterative, plan for improvements for each subsequent year, and have the goal of long-term maintenance if the project proves to be successful.

A significant problem that is mentioned by public health experts is that funding is categorical but societal problems that lead to bad health outcomes are not. In her book Common Purpose: Strengthening Families and Neighborhoods to Rebuild America<sup>35</sup>, Schorr describes a project that was able to create a fund “by an imaginative and unusual blending of federal moneys awarded to state agencies.” She continues, “An official of the U.S. Department of Health and Human Services says he considers this a remarkable achievement that could serve as a model for how states can make uncategorical use of categorical funds.” (p.45) We need to start thinking outside of the proverbial box and come up with innovative and creative ways to find longer-term funding for projects that have been successful.

## **Timing of the intervention**

The timing of the intervention appeared to be important. The APPLE project PI mentioned that the timing was good, that had this intervention had been done later, they probably wouldn't have had this impact. In fact, their initial successes published in an interim report after two years of the project, were not seen by the final report. The PI felt that the control community “caught up with” the intervention in terms of condom use. The ACCESS project PI had been pushing for free HIV testing before her project was implemented, but the topic was sensitive. An



assessment of the social and political climate seems to be an important consideration when planning a project. If the political or social climate is not right, the intervention may be ineffective because the community is not ready for it. If the overall social norms are changing in all of society (e.g., when norms about smoking began to change in the U.S.), then a community change may be undetectable.

### **Implementing effective evaluations**

In order to detect any change in behavior, which was the goal of both of these projects, an effective evaluation must be completed. It appears that both projects had difficulties with their evaluators either trying to measure things that they were not doing or not measuring what they were, in fact, doing. Since this is a common problem, it's important to make efforts in the earliest stages of planning to ensure that your evaluation team, whether internal or external, has an understanding of the purpose and components of a given project. Evaluations are often expensive and as in the case of the ACCESS project, aren't always completed. Evaluations are often an afterthought when they, ideally, should be designed concurrently with the program.<sup>36</sup> We need to make effective evaluations a priority so that we can measure the effects that our interventions are having and, when proven effective, can use this as bargaining power to request more funding and as evidence to consolidate political and societal support of our projects.

But evaluations should not only be used to prove that interventions worked. According to the Kellogg Foundation<sup>37</sup>, an "evaluation should not be conducted simply to *prove* that a project worked, but also to *improve* the way it works. Therefore, do not view evaluation only as an accountability measuring stick imposed on projects, but rather as a management and learning tool for projects, for the Foundation, and for practitioners in the field who can benefit from the experiences of other projects." The Kellogg Foundation established principles to help guide

evaluation work with the goal of improving the well-being of people. The Foundation supports the use of multiple approaches, a design to address real issues, the use of a participatory process and encourages flexibility in the way projects are designed, implemented, and modified. In addition to the Kellogg Foundation's Evaluation Handbook, many resources are now available to inform evaluation planners about methods to design effective evaluations.

## **IMPLICATIONS FOR PRACTICE AND POLICY**

The advent of HAART therapy in 1996 has led to an increasing number of people living with AIDS in the U.S., prompting the CDC to shift its prevention efforts from those at risk to persons living with HIV.<sup>38,39</sup> However, the HIV epidemic in the United States continues to change and will require both improved surveillance and creative and comprehensive HIV prevention interventions to respond to these changes. For example, in 2003, the North Carolina Department of Health (NCDOH) and the CDC discovered an increase in HIV case reports in male college students. After an epidemiologic investigation, they reported that black MSM college students and non-students in North Carolina has high rates of HIV risk behaviors and that the MSM included men who had sex with both men and women.<sup>40</sup> This identified a new outbreak in a new population (due to a new risk factor) and the response to this should be an HIV prevention intervention customized to this specific population. But an appropriate intervention would not only target black MSM college students, but would also target black females at these colleges and universities since they most likely are unaware of their increased risk for HIV.

A new outbreak in an old risk group is predicted by some public health experts. A recent New York Times article reported that many gay men who know "the rules of engagement" in the age of AIDS are not using condoms.<sup>41</sup> This appears to be driven by increased use of crystal methamphetamine and a relaxed attitude about HIV/AIDS in the era of HAART therapy. As

public health experts and gay activists express frustration over having to start over with their AIDS awareness efforts, this provides us with a cautionary tale and will hopefully provide us with an incentive to continue to focus efforts to change the behaviors of high-risk groups as well as those who are known to be HIV-infected.

## **FUTURE RESEARCH**

Future research is required to provide us with answers as to how we can effectively motivate behavioral change, especially when it relates to sexual behavior. By customizing messages to high-risk populations, social marketing techniques can be an effective means of implementing HIV prevention interventions. But to truly affect change, our interventions will require creative approaches, effective partnerships with communities, new approaches to funding and effective evaluations.

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(If yes) Which theories have been most often utilized?

- ☐ Exchange Theory
- ☐ Health Belief Model
- ☐ Theory of Reasoned Action
- ☐ Theory of Planned Behavior
- ☐ Social Learning Theory
- ☐ Information-Processing Paradigm (McGuire)
- ☐ Transtheoretical Model
- ☐ Community Organization Model
- ☐ The Social-Ecological Approach
- ☐ Other: \_\_\_\_\_

Were the target audiences identified and defined in the campaigns? Y/N

Which age groups were targeted?

- ☐ Children (grade 6 and under)
- ☐ Adolescents (grades 7 through 12)
- ☐ Adults (18 years of age and older)
- ☐ Adult seniors (55 and older)

Why were these age groups chosen? \_\_\_\_\_

When target audiences have been identified, was there segmentation based on the concepts of psychographics/lifestyle and demographics? (Andreasen 3)

- ☐ Psychographics?
- ☐ Lifestyle?
- ☐ Demographics?
  - ☐ Rural/urban?
  - ☐ Ethnicity/race? If yes, who: \_\_\_\_\_

Why was the segmentation done in this manner? \_\_\_\_\_

When target audiences have been identified, have these audiences been further defined as primary and secondary?

Yes \_\_\_\_\_ No \_\_\_\_\_

If yes, primary audience: \_\_\_\_\_ secondary: \_\_\_\_\_

Why was this primary audience chosen? \_\_\_\_\_

Why was this secondary audience chosen? \_\_\_\_\_

Which of the four Ps was most important in the design of this campaign: (Andreasen 5)

- ☐ Products – creating attractive benefit packages
- ☐ Price – minimizing cost
- ☐ Place – making the exchange convenient and easy
- ☐ Promotion – communicating powerful messages through media relevant to and preferred by target audiences

Was the fifth P, “positioning”, also considered? Y/N

(This refers to the location of the product relative to other products and activities with which it competes.)

Why or why not? \_\_\_\_\_

Was audience research used to routinely pretest intervention elements before they were implemented? Y/N (Andreasen 2b)

Why or why not? \_\_\_\_\_

If yes, how often were key concepts and messages pretested?

When message/concept pretesting has been carried out, what methods have been employed?

- ☐ Informational consultation with community members
- ☐ Focus groups
- ☐ Survey methods
- ☐ Experimental testing of alternative message formats

Why were these methods chosen? \_\_\_\_\_

Which of the following entities have been the focus of change in your campaign?

- ☐ Individual behavior
- ☐ Family practices
- ☐ Community norms and activities
- ☐ Policy
  - ☐ Media advocacy component included?

Why were these chosen? \_\_\_\_\_

In designing this intervention, was thought given to creating attractive and motivational exchanges with target audiences? Y/N (Andreasen 4)

Why or why not? \_\_\_\_\_

Was thought given to the competition faced by the desired behavior? Y/N (Andreasen 6)

Why or why not? \_\_\_\_\_

Were community citizens and community leaders involved in the planning and research phase of the campaign?

Why or why not? \_\_\_\_\_

If community participation was a component, which of the following strategies were employed to foster involvement:

- ☐ Focus groups
- ☐ Citizen advisory committees/boards
- ☐ Staff members hired from the community
- ☐ Local consultants
- ☐ Other: \_\_\_\_\_

Were these strategies successful? \_\_\_\_\_

Did you experience any barriers to involving the community? Y/N

If yes, what were these barriers? \_\_\_\_\_  
\_\_\_\_\_

Did campaign designers obtain information from target audiences about their communication channel use? Y/N

Why or why not? \_\_\_\_\_

Did the campaign designers identify maintenance of the intervention as a long-term goal? Y/N

Why or why not? \_\_\_\_\_

Was the intervention pilot tested in its entirety? Y/N

Why or why not? \_\_\_\_\_

What were the challenges that you faced in designing this program?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What factors enabled you to be successful in the design of this program?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

What elements of the design could be transferred to other contexts or communities?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Which elements of the design are more specific to your setting?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Is there anything else that you'd like me to know about the project design?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

If you were to design a similar program, what changes would you make to the project design based on what you learned from this project?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



## The Intervention

Which of the following products have been produced in this campaign?:

- ☐ Educational/behavioral/ideational
- ☐ Services
- ☐ Material products
- ☐ Other: \_\_\_\_\_

Did this campaign make an attempt to make adoption of the recommendation(s) less costly to target audiences? Y/N

Why or why not? \_\_\_\_\_

Were any of the following types of incentives used to overcome the costs of recommendation adoption:

- ☐ Monetary
- ☐ Material reward
- ☐ Social recognition
- ☐ Personal reinforcement
- ☐ Other: \_\_\_\_\_

Why or why not? \_\_\_\_\_

Through which of the following distribution mechanisms was the product distributed?

- ☐ Schools
- ☐ Workplace
- ☐ Community events
- ☐ Community outreach
- ☐ Health providers
- ☐ Commercial outlets
- ☐ Other: \_\_\_\_\_

Why was this mechanism chosen? \_\_\_\_\_

Through which of the following mediated distribution mechanism was the product distributed:

- ☐ Broadcast media
- ☐ Print media
- ☐ Other: \_\_\_\_\_

Why was this mechanism chosen? \_\_\_\_\_

Were community members recruited as collaborators for the purpose of campaign implementation? Y/N

Why or why not? \_\_\_\_\_

What were the challenges you experienced in implementing this program?

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What factors enabled you to be successful with the implementation of this program?

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What elements of your program could be transferred to other contexts or communities?

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What elements of your program are more specific to your setting?

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If you were to implement a similar program, what changes would you make to the implementation based on what you learned from this implementation?

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## Evaluation

How often was the campaign evaluated?

Was audience research used to monitor interventions as they were rolled out? Y/N (Andreasen 2c)

Why or why not? \_\_\_\_\_

[If behavior change was one of the objectives:] Was a particular amount of behavior change required in order to consider it truly a change? Y/N

If so, how much \_\_\_\_\_

If not, why not? \_\_\_\_\_

Did this campaign report analyses of the target audience environment to identify supportive and unsupportive elements? Y/N

Why or why not? \_\_\_\_\_

Did you carry out environmental analyses? Y/N

If so, which of the following methods have been employed:

- ☐ Ethnographic observation
- ☐ Focus groups
- ☐ Consultations with community leaders
- ☐ Survey research
- ☐ Use of existing data

If not, why not? \_\_\_\_\_

Was a summative evaluation conducted to evaluate the intervention's impact? Y/N

Why or why not? \_\_\_\_\_

When an evaluation has been conducted, have any of the following evaluation models been employed:

- ☐ Advertising model
- ☐ Impact monitoring model
- ☐ Quasi-experimental model
- ☐ True experiment
- ☐ Other: \_\_\_\_\_

Why were these models chosen? \_\_\_\_\_

Which of the following outcomes were measured in the evaluation components of this campaign:

- ☐ Knowledge gains
- ☐ Attitude change
- ☐ Self-efficacy
- ☐ Self-reported behaviors
- ☐ Intention to change
- ☐ Observed behavior change
- ☐ Measured clinical (medical) changes
- ☐ Morbidity reduction
- ☐ Mortality reduction
- ☐ Other: \_\_\_\_\_

Why were these outcomes chosen? \_\_\_\_\_

Were efforts made to assess campaign cost-effectiveness? Y/N

Why or why not? \_\_\_\_\_

What were the challenges in evaluating this program?

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What factors enabled you to be successful at evaluating this program?

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Based on your evaluation, what things would you change:

In the design?\_

In the implementation?\_

In the evaluation?

Is there anything else that you would like me to know about any aspect of your project?

**APPENDIX B**  
**Introductory Letter**

Trudy K. Singzon  
109 Culbreth Park Drive  
Chapel Hill, NC 27516

[PI Name]  
[PI Address]

[Date]

Dear [Name]:

My name is Trudy Singzon and I'm a graduate student at the UNC School of Public Health. You are invited to participate in a research study entitled *Program Evaluation of Social Marketing HIV Prevention Intervention Programs*. I am currently the Principal Investigator of this research project that aims to determine the lessons learned from HIV social marketing prevention interventions to inform the development of future social marketing interventions. You are being asked to participate because your project was identified by some researchers at UNC as one of the only two HIV prevention interventions that was designed with attention to the necessary components of social marketing and included an evaluation component.

If you agree to participate in this research study, you will be asked to provide any project documents such as progress reports, program description, program objectives, or stated goals so I can perform a review of this secondary data. Upon the review of these documents, I will send you a brief survey for your review. This survey will include any information that I've been able to glean from your project documents (for you to review and revise if necessary) as well as several additional questions that could not be answered. In addition, I'd like to interview you or several other people who were involved with the project design, implementation and the evaluation to determine the lessons learned from your HIV prevention intervention. I will email or fax the interview questions prior to the actual phone interview for your review. You are free to choose not to respond to any questions that you do not wish to address for any reason.

If you do not believe that you are the best person to address each aspect of the project – design, implementation, and the evaluation – and instead suggest that I speak with other project personnel, I would ask that you contact them first to tell them about the project and to obtain their permission for me to contact them prior to giving me their names and contact information.

Please review the attached Consent Form. If you would like to participate in the study, please sign and return the Consent Form to me at the above address. Then please contact me via email at [Trudy\\_Singzon@med.unc.edu](mailto:Trudy_Singzon@med.unc.edu) at your earliest convenience so we can set up a time to discuss the project. Thank you for your time and attention. I look forward to speaking with you in the near future.

Sincerely,

Trudy K. Singzon  
MD-MPH Candidate, 2005  
Encl

